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ABSTRACT

The purpose of this article is to suggest the value of a research tool which has rarely been used in studies in instruction in writing: baseline measurement of group and individual performances. This approach was used in examining the results of a study of a self-instructional program in narrative writing which was prepared for and tested by secondary school students. During instruction, a process approach to writing, students were taught to use a set of questions to systematically and sequentially select a subject for a narrative, to develop a rough draft, and to make additions to expand the narrative. The goal of instruction was that students would achieve and/or maintain control of the structure of the narrative while learning to expand their narrative for the sake of completeness, development, and interest. An instrument was designed to measure three qualities indicative of control of structure and three characteristics of expansion. Of the 27 students who completed the program, the majority showed positive pretest-posttest changes in the variables related to expansion and demonstrated control of structure on both pretests and posttests. The baseline measures were found to be very useful. (JM)

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Evaluating and Increasing the Effectiveness of Instruction in Writing

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Discussions in both popular and professional periodicals reveal a near universal criticism of instruction in writing. The great quantity and variety of research in instruction in writing has apparently had little effect in improving instruction. Experimental studies generally have been plagued with some shortcomings. In many cases, objective, systematic measurements have been limited to "negative behaviors" (ones that most teachers agree are the least important aspects of writing) errors in spelling, punctuation, and usage. Attempts to measure positive behaviors, with only a few recent exceptions, have been limited to quick, overall, subjective ratings of hard-to-define (and often undefined) qualities: significance, interest, clarity, sincerity, unity.

Experimental studies have tended to focus on the group and to neglect the individual. Typically a method is examined by comparing it to one or more other methods, with effectiveness (or its lack) reported solely in terms of mean performance. Typically, no attempt is made (or at least the attempt is not reported) to demonstrate and increase the effectiveness of a method before comparing it to others.

A related problem has been that pre and post measures have not been used (and are still not used widely). Without them, the researcher has no way of demonstrating that any changes occurred

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during or after treatment, that qualities demonstrated were not present prior to instruction, or that sufficient numbers of students demonstrated enough positive gains to justify comparing the methods with others.

A most difficult problem has been specifying positive behaviors as objectives for instruction and finding objective, valid, and reliable ways of measuring those changes. And this problem, in turn, may be part of the most pressing problem of all: a lack of definition and agreement of the goals of instruction in writing.

At the risk of oversimplification, the problem may be summed up as follows: Is the goal of any instruction, whether it be at the elementary, secondary or college level, to identify those students who can already meet adult, professional standards, so that those students may be selected for tracking, placement, or qualification for special courses? Or, is the goal of any instruction to provide students with the opportunity to work toward those standards by increasing and strengthening, over a period of time, desirable behaviors?

This writer subscribes to the second goal, and that goal is the motivation for this article. The main purpose of the article is to suggest the possible value of a research "tool" that can be used in addition to procedures commonly employed in research in writing: baseline measurement of group and individual performances. The more immediate purpose of this article is to report on the use of that "tool" in analyzing the results of a study of one instructional method.

"Baseline measurement" is defined as follows: the researcher observes and records the students' (or subjects') behavior prior to instruction. The researcher then continues to observe the behavior throughout the period of the instruction and, when analyzing and interpreting his data, uses all observations of the behavior rather than just observations before and after instruction (or pre-post changes). Baseline measurement,thus, can yield more data about both groups and individuals and the effects of instruction.

A self-instructional program in narrative writing was written for and tested by secondary schoool students. The program was not compared with other materials or methods. Rather, the purposes of the testing were: (1) to increase the effectiveness of the instruction by trying it out and revising it in light of responses made by students, and (2) to examine the possibility of using objective measures of positive changes in particular writing behaviors. The instruction taught a process-approach to writing. Students were taught to use a set of questions to systematically and sequentially select a subject for a narrative, develop a rough draft, and make additions to expand the narrative.

The goal of the instruction was that students would achieve and/or maintain control of the structure of the narrative while learning to expand their narratives for the sake of completeness, development, and interest. An instrument was designed to measure, objectively, three qualities indicative of control of structure (unity, point of view, and chronological order) and three characteristics of expansion (completeness, in terms of number of basic questions answered in the

narrative; development, in terms of number of words that answered each of the questions; and total number of words or length of the narratives).

The instruction was tried out by individual students and revised and then tried out by a group of students. The effectiveness of the program was demonstrated to this extent, Lamberg, (1974): of the 37 students who started the program, 27 completed it. Of the 27 who completed it, the majority showed positive pre-post changes in the three variables related to expansion, and the mean pre-post changes were statistically significant. The majority demonstrated control of structure on both pre and post-tests.

On the negative side, an examination of the responses to the program revealed that the students who did not complete the program had the same range of pre-test performances as those that did complete it, that some students showed steady decreases from the pre-test performance, that many students showed erratic changes from one narrative to another, and that there were many instances of inappropriate responses to frames in the last two sections of the program.

It was hoped that an analysis of baseline measures of the group and the individual students' performances would aid in verifying the apparent weaknesses of the instruction and in suggesting a course of action for improving the instruction and for further research. The analysis was limited to one variable, that of number of words in each narrative. A positive correlation had been discovered between total number of words and the other two variables measured to determine improvement in expansion, Lamberg (1974).

The performances of 19 students were examined. These students turned in all of the narratives they wrote. The other students turned in only their pre and post-narratives. Table 1 reports the performances (as measured in number of words) on four narratives or trials. The first trial was used as a pre-test; the fourth was used as a post-test. The mean score on the first trial was 162.7; on the second, 213.9; on the third, 170.7; and on the fourth, 217.0.

Table 1 about here

Performances on the second, third, and fourth trials were compared to performances on the first to determine changes in performance. Those changes, in terms of increases or decreases in number of words and percentage increases and decreases, are reported in Table 2. The mean gain in number of words on the second trial was 61.8 or 45 percent; on the third trial, 21.3 or 18 percent; and on the fourth trial, 54.5 or 37 percent.

Table 2 about here

A count was made of the number of students who showed increases, decreases, or no changes from the first trial through the subsequent trials. On the second trial, of the 19 students, 15 showed increases, 4 showed decreases; on the third, 14 showed increases, 5 showed decreases; on the fourth, 16 showed increases; 3 showed decreases.

To analyze the effect of the instruction on individual students, a comparison was made of the performances by each student on each subsequent trial with the performance on the first trial. Of the

19 students, 12 showed increases on all three of the trials; 2 showed decreases on all three; and 5 showed both increases and decreases.

A further comparison was made, for those students who showed pre-post gains, between subsequent narratives and the performance on the first trial to determine: (1) how many students made steady gains; (2) how many showed unsteady gains; and (3) how many showed erratic changes, that is, the performance on the second or third trial showed a decrease from that of the first trial. Of the 19 students, 16 showed pre-post gains. Of those 16, only one showed steady gains from one trial to the next, a 44 to 47 to 51 percent increase on the second, third, and fourth trials from the first trial. Eleven showed unsteady gains. Four showed erratic changes, both increases and decreases from the performance on the first trial.

A comparison of the performance of each student on his third trial with that on his second revealed that 6 showed an increase from the second trial; 13 showed a decrease. A comparison of the performance on the fourth trial with that on the second showed that 9 showed an increase from the second trial; 10 showed a decrease. A comparison of the performance on the fourth trial with that of the third revealed that 10 showed an increase; 9 showed a decrease.

Implications: The Effectiveness of the Instruction

The instruction consisted of three sections, the first section led up to trial 2; the second led up to trial 3, and the third led up to trial 4, the post-test. The data reveals that the second section was apparently the least effective. The mean performance was only 7.94 points better than that of the first trial; the mean percentage increase

was 18%; of the 19 students, 5 showed decreases from the first trial.

The first section of the program would appear to be the most effective of all the sections in terms of the largest mean increase: 45 percent, compared with 18 percent on the third and 37 percent on the fourth. However, on the fourth trial more students showed increases from the first trial, 16 of the 19 compared with 15 of the 19 on the second trial, and the mean performance was 217.0 as compared with 213.9 on the second trial.

The expectation that there would be steady gains in performances because of the nature of the instruction (i.e., providing a systematic procedure for expanding the narratives by answering basic questions) was clearly not realized. Only one student showed steady gains. The trend in the group performance was a considerable increase on the second trial, a considerable drop on the third trial, and a gain on the fourth trial which generally did not meet or surpass that of the second trial.

Implications: Further Development and Testing of the Instruction

Why was the performance of students generally erratic? It could be that an erratic performance is characteristic of students when they first experience instruction designed to make direct and considerable changes in their writing behaviors. It may be that the very nature of the writing experience contributes to erratic behavior; that is, there are very important variables beyond the control of researcher or teacher. The choice of subject for writing, for example, might have a major effect on the quality and quantity of writing and the

students' motivation. Or, it may be that there was a severe weakness in the overall design of the instruction. In any case, an answer to this question must await further development and testing of instruction as well as comparison of treatments with control groups.

The information collected, however, does lend support to the author's belief in the desirability and possible necessity of looking at many samples of writing over a period of time in order to best evaluate both students' achievement and the effectiveness of instruction, rather than relying on pre and post narratives. For future research, it would be desirable to observe many more occasions of writing to see if positive changes were maintained or increased and if gains became steadier.

As far as development of the instruction is concerned, it may be that less rather than more instruction is desirable. This may be a very important consideration. Typically, when self-instructional materials are developed, they are expanded. More exercises are provided for skills already treated, skills are broken down and the sub-skills are provided for, and instruction in other related skills is introduced.

In the program in narrative writing, however, the basic skills in the process-approach were introduced in the first section. The additional instruction in other sections may not be necessary. Possibly, it may not be desirable; that is, the work and time required of the students to go through the frames may not have been worth the apparently slight benefits.

A course of action suggested by the comparison of the performances

of the second trial with those on the third and fourth is as follows: the first section of the program would be preserved; the other sections would be deleted, except for the practice provided in the third and fourth trials. If the revised program seemed more effective (more students showed positive changes, and changes were greater and steadier), then it would be worth comparing this treatment to others to control for and examine such important variables as: the choice of subject, the frequency of practice, the kind of feedback, the content of the instruction itself; that is, the effectiveness of the process-approach.

Reference

Lamberg, W. J. Design and validation of instruction in question-directed narrative writing, developed through discrimination programming. Unpublished doctoral dissertation, University of Michigan, 1974. Summarized under the same title in ERIC/EDRS: ED 097 689. Abstracted in Resources in Education, X, 3 (March, 1975), 41.

Table 1

Number of Words in Narratives, Written by Secondary School Students, Before During, and After Instruction

Student	Trail 1	Trial 2	Trial 3	Trial 4
1	195	379	221	260
2	361	232	233	154
3	107	231	166	129
4	236	341	346	355
5	112	221	103	206
6	91	278	95	65
7	134	128	54	234
8	143	60	70	129
9	149	182	228	154
10	110	116	108	118
11	119	160	126	125
12	164	206	174	221
13	164	434	217	193
14	294	233	235	491
15	153	123	129	486
16	165	228	307	241
17	129	100	85	267
18	166	274	210	185
19	100	138	135	110
Mean	162.7	213.9	170.7	217.0

Table 2

Positive and Negative Changes, in Number of Words and Percentages, in Narratives Written by Secondary School Students, During and After Instruction

Student	Trial 2		Trial 3		Trial 4	
	In Words	In %	In Words	In %	In Words	In %
1	184	.94	6	.13	65	.33
2	-129	-.36	-123	-.35	-207	-.57
3	124	1.16	59	.55	22	.21
4	105	.44	110	.47	119	.51
5	109	.97	-9	-.08	94	.84
6	187	2.05	4	.04	-26	-.29
7	-6	-.04	-80	-.60	100	.75
8	-83	-.58	-73	-.09	-14	-.10
9	33	.22	79	.03	3	.03
10	6	.05	-2	-.07	8	.07
11	41	.34	7	.06	6	.05
12	42	.25	10	.06	57	.35
13	270	1.65	53	.32	29	.18
14	61	.21	59	.20	197	.67
15	30	.13	24	.15	338	2.21
16	65	.39	142	.86	76	.46
17	-29	-.22	44	1.07	138	1.07
18	108	.65	44	.27	19	.11
19	38	.38	35	.35	10	.10
Mean	60.8	.45	21.3	.18	58.5	.37